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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,291	10/28/2003	Hua Tang	TPIP021	3947

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EXAMINER	
HUYNH, CARLIC K	
ART UNIT	**PAPER NUMBER**
1617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/695,291	TANG ET AL.	
	Examiner	Art Unit	
	Carlic K. Huynh	1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *16 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Receipt of applicants' amendments and remarks filed on July 16, 2007 is acknowledged.

Status of the Claims

1. Claims 1-16 are pending in the application, with claim 9 having been withdrawn from consideration, in response to the election/restriction filed on December 19, 2006. Claim 17 has been cancelled in applicants' amendments and remarks filed on July 16, 2007. Accordingly, claims 1-8 and 10-16 are being examined on the merits herein.

Response to Arguments

2. Applicant's arguments, see "Remarks" filed on July 16, 2007, with respect to "Objections to the Specification" to the use of trademarks in the specification has been fully considered and are found persuasive. The Applicants have amended the specification to capitalize the trademarks Diprivan®, Rapinovet TM, PropoFlo TM, Brij®, Tween®, Cremophor®, and Intralipid® and have included their chemical names. Thus the "Objections to the Specification" are withdrawn in light of the amendments.

3. Applicant's arguments, see "Remarks" filed on July 16, 2007, with respect to "Rejections under 35 U.S.C. § 102" to claim 17 have been fully considered and are found persuasive. Applicants have cancelled claim 17 without prejudice. Thus the "Rejections under 35 U.S.C. § 102" to claim 17 is withdrawn.

4. Applicant's arguments, see "Remarks" filed on July 16, 2007, with respect to "Rejections under 35 U.S.C. § 103" to claims 1-8 and 10-16 have been fully considered and are found

persuasive. Applicants have argued that Busta et al. do not teach that cysteine itself has antimicrobial activity and that Mishra et al. is silent with respect to cysteine.

This argument is not found persuasive because Busta et al. do teach insect defensins, which are antibacterial proteins that are cysteine-rich. Because cysteine is a major component of insect defensins, cysteine, in this case, may be seen as an antibacterial agent.

This argument is also found not persuasive because Mishra et al. teach additional antimicrobial agents but does not limit the antimicrobial agents to parabens or sulfite or edetate (see column 5, lines 50-52). Thus, these additional antimicrobial agents may be the insect defensins of Busta et al.

Thus the "Rejections under 35 U.S.C. § 103" to claims 1-8 and 10-16 remain.

5. Applicant's arguments, see "Remarks" filed on July 16, 2007, with respect to "Double Patenting Rejections" to claims 1, 11, and 17 have been acknowledged. Applicants have stated they "will address this rejection, if needed, when the claims of this application have been deemed allowable". The "Double Patenting Rejections" to claims 11 and 17 have been withdrawn because claim 11 is directed to a pharmaceutical composition comprising a water immiscible solvent and claim 17 has been cancelled without prejudice at stated above.

6. Applicant's arguments with respect to claims 1-8 and 10-17 have been considered but are moot in view of the new ground(s) of rejection. The following new ground(s) of rejection to amended claims 1-8 and 10-17 are used herewith.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al. (US 2004/0265388).

Zhang et al. teach a composition of propofol and cysteine that will support no more than a 10-fold increase in growth, of each of Staphylococcus aureus ATCC 6538, Escherichia coli ATCC 8739, Pseudomonas aeruginosa ATCC 9027, and Candida albicans ATCC 10231 for at least 24 hours as measured by a test wherein a washed suspension of each said organism is added to a separate aliquot of said composition at approximately 50 colony forming units per ml, at a temperature in the range 20^{O}C to 25^{O}C, whereafter said aliquots are incubated at 20^{O}C to 25^{O}C for 24 hours and thereafter tested for viable counts of said organism (page 6, paragraph [0060]). The composition containing propofol is in an aqueous medium with at least two excipients, namely poloxamer 188 and PEG 400 (page 2, paragraph [0015]). The composition containing propofol has a pH of about 5 to 6 (page 9, paragraph [0080]). The composition containing propofol is administered intravenously (page 9, paragraph [0083]).

For these reasons the claimed subject matter is deemed to fail to patentably distinguish over the state of the art as represented by the cited reference. The claims are therefore properly rejected under 35 U.S.C. 102 (e).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. (US 2004/0265388).

Zhang et al. is applied as in claims 1-8 above.

Zhang et al. further teaches that the composition of propofol and cysteine contains another anesthetic (page 10, paragraph [0092]). Since lidocaine is a well known anesthetic, it would be obvious that lidocaine is the anesthetic taught by Zhang et al.

9. Claims 1-8 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mirejovsky et al. (US 6,147,122) in view of Mishra et al. (US 7,097,849), as evidenced by Bulet et al. (Developmental and Comparative Immunology, 1999, vol. 23, pp 329-344).

Mirejovsky et al. teach a propofol composition containing sulfite as an anti-microbial agent (abstract).

The propofol composition of Mirejovsky et al. is prepared by injection (column 12, line 43). Propofol is 1% by weight of the composition and is soluble in the aqueous phase (column 4, line 35; and column 3, line 27). The propofol composition also contains a water-immiscible solvent, such as vegetable oil, at 10% weight, a surfactant, such as egg or soy phosphatides, at

1.2% weight, and is formulated with pH in the range of about 4.5 to about 6.4 (column 4, lines 32-35, 48-50, 59, and 63-65; column 5, lines 19-20; and column 12, line 47).

The anti-microbial agent of the propofol composition is about 0.0075% to about 0.66% weight (column 4, lines 12-14). The anti-microbial agent is in an amount sufficient to prevent the growth, or prevent no more than a 10-fold increase in growth, of each of *S. aureus* (ATCC 6583), *E. coli* (ATCC 8739), *P. aeruginosa* (ATCC 9027), and *C. albicans* (ATCC 10231) for at least 24 hours wherein each organism is added at 50-200 colony forming units and incubated at 30-35^{0}C (column 8, 3. Microbiological activity; and column 12, lines 25-38).

Mirejovsky et al. do not teach cysteine as the anti-microbial agent and a local anesthetic.

Mishra et al. teach a propofol composition comprising an anti-microbial agent and a local or long lasting anesthetic, such as lidocaine (column 1, line 7; and column 5, lines 47-51).

As evidenced by Bulet et al., it is disclosed that insect defensins, which are cysteine-rich peptides, are an antimicrobial peptide or agent (abstract and pages 330 and 333).

Since cysteine is known to be an antibacterial agent, it would be obvious that the anti-microbial agent of Mishra et al. may be cysteine.

To a person of skill in the art at the time of the invention, it would have been obvious to employ the propofol composition of Mirejovsky et al. to contain an anti-microbial agent and a local anesthetic because the propofol compositions of Mishra et al. contain an anti-microbial agent and a local anesthetic and according to Mishra et al., propofol compositions can contain an antibacterial agent such as cysteine and an additional local or long acting anesthetic such as lidocaine.

The motivation to combine the propofol composition of Mirejovsky et al. to the propofol composition of Mishra et al. is that the propofol compositions of Mishra et al., contain an antibacterial agent such as cysteine and an additional local or long acting anesthetic such as lidocaine.

Double Patenting

Obviousness-Type

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Zhang et al. (US 2005/0027019) will be referred to as (10/629,308), Zhang et al. (US 2004/0220283) will be referred to as (10/677,747), and Zhang et al. (US 2004/0265388) will be referred to as (10/766,631).

10. Claim 1 is provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, and 6 of copending Application Zhang et al.

(10/629,308) as evidenced by Bulet et al. (Developmental and Comparative Immunology, 1999, vol. 23, pp 329-344).

Claims 1, 2, and 6 of copending Application Zhang et al. are directed to an aqueous composition comprising propofol and an antimicrobial agent.

As evidenced by Bulet et al., it is disclosed that insect defensins, which are cysteine-rich peptides, are an antimicrobial peptide or agent (abstract and pages 330 and 333).

Since cysteine is an antibacterial agent, it would be obvious that cysteine is an antimicrobial agent. Thus, claims 1, 2, and 6 of copending Application Zhang et al. meets the limitations of the instant claim 1.

This is a provisional double patenting rejection since the conflicting claims have not been patented.

11. Claim 1 is provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 18 and 23 of copending Application Zhang et al. (10/677,747) as evidenced by Bulet et al. (Developmental and Comparative Immunology, 1999, vol. 23, pp 329-344).

Claims 18 and 23 of copending Application Zhang et al. (US 2004/0220283) are directed to a composition comprising propofol and an antimicrobial agent.

As evidenced by Bulet et al., it is disclosed that insect defensins, which are cysteine-rich peptides, are an antimicrobial peptide or agent (abstract and pages 330 and 333).

Since cysteine is an antibacterial agent, it would be obvious that cysteine is an antimicrobial agent. Thus, claims 18 and 23 of copending Application Zhang et al. meets the limitations of the instant claim 1.

This is a provisional double patenting rejection since the conflicting claims have not been patented.

12. Claim 1 is provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 35-36 of copending Application Zhang et al. (10/766,631).

Claims 1 and 35-36 of copending Application Zhang et al. are directed to a composition consisting essentially of an aqueous solution of propofol and cysteine. "Consisting essentially of" will be construed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355. Thus, claims 1 and 35-36 of copending Application Zhang et al. meets the limitations of the instant claim 1.

This is a provisional double patenting rejection since the conflicting claims have not been patented.

Conclusion

13. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlic K. Huynh whose telephone number is 571-272-5574. The examiner can normally be reached on Monday to Friday, 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ckh

CHENGJUN WA
PRIMARY EXAM